

SEQUENCE LISTING

<110> Roche, Andrew
 Hansen, Martin Chr.
 Villsen, Inge D.
 Schrotz-King, Petra
 Henningsen, Jeannette
 Lund Jorgensen, Trine Louise

<120> Extracellular Aspergillus Polypeptides

<130> 13403.1003

<160> 49

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 260

<212> PRT

<213> Aspergillus Fumigatus

<400> 1

Met	Leu	Ala	Ser	Phe	Gln	Phe	Cys	Ile	Leu	Pro	Arg	Thr	Tyr	Arg	Thr
1				5					10					15	
Leu	Leu	Cys	Ser	Ala	Gly	Ala	Gly	Pro	Leu	Leu	Ile	Ile	Gln	Phe	Val
			20					25					30		
Thr	Val	Ala	Ser	Ala	Leu	Ala	Leu	Ala	Pro	Thr	Ala	Val	Val	Ala	Arg
		35					40					45			
Gln	Gly	Ala	Ala	Ala	Phe	Val	Thr	Val	Asn	Ser	Ile	Asp	Val	Cys	Pro
	50					55					60				
Lys	Lys	Val	Ala	Gln	Glu	Ile	Ile	Asn	Pro	Gly	Pro	Lys	Val	Val	Thr
65					70					75					80
Thr	Pro	Tyr	Thr	Cys	Asp	Gln	Val	Lys	Leu	Gly	His	Gly	Leu	Asp	Val
				85					90					95	
Ser	Tyr	Tyr	Asn	Phe	Asp	Ile	Glu	Pro	Leu	Thr	Lys	Asp	Thr	Phe	Pro
			100					105					110		
Tyr	Cys	Lys	Ala	Leu	Lys	Val	Phe	Asp	Asn	Glu	Gly	Cys	Leu	Gly	Phe
		115					120					125			
Pro	Thr	Leu	Trp	Ile	Pro	Leu	Glu	Ser	Pro	Leu	Glu	Asp	Lys	Cys	Ile
		130				135					140				
Pro	Glu	His	Tyr	Phe	Ser	Asp	Glu	Val	Lys	Ser	Ile	Ser	Phe	Gln	Leu
145					150					155					160
Asp	Cys	Arg	Glu	Asp	Ala	Pro	Val	Lys	Lys	Glu	Pro	Tyr	Gly	Pro	Lys
			165						170					175	
Glu	Gly	Ala	Glu	Gln	Ser	Ala	Pro	Gln	Ala	Glu	His	Ser	Thr	Lys	Gln
			180					185					190		
Asp	Ala	Gln	Gln	Gly	Ser	His	Gln	Gly	Gln	Glu	Val	Gln	Asn	Ser	Pro
		195					200					205			
Lys	Gln	Glu	Ala	Arg	Gln	Gly	Ser	Arg	Pro	Ala	Glu	Ala	Ala	Pro	Lys
	210					215					220				
Gln	Glu	Gln	Glu	Ala	Glu	Gln	Ala	Ser	Glu	Ala	Ala	Pro	Glu	Lys	Lys
225					230					235					240
Ala	Ser	Asn	Pro	Ala	Asp	Ser	Leu	Gly	Leu	Gly	Glu	Leu	Thr	Lys	Val

BEST AVAILABLE COPY

Ser	Thr	Gly	Ala	Ala	Lys	Ala	Val	Gly	Lys	Val	Ile	Pro	Ser	Leu	Asn
	210					215					220				
Gly	Lys	Leu	Thr	Gly	Met	Ala	Met	Arg	Val	Pro	Thr	Ser	Asn	Val	Ser
225					230					235					240
Val	Val	Asp	Leu	Thr	Cys	Arg	Leu	Glu	Lys	Gly	Ala	Ser	Tyr	Asp	Glu
				245					250					255	
Ile	Lys	Gln	Ala	Ile	Lys	Ala	Ala	Ser	Glu	Glu	Gly	Glu	Leu	Lys	Asn
			260					265					270		
Ile	Leu	Gly	Tyr	Thr	Glu	Asp	Asp	Val	Val	Ser	Ser	Asp	Leu	Asn	Gly
		275					280					285			
Asp	Glu	Arg	Ser	Ser	Ile	Phe	Asp	Ala	Lys	Ala	Gly	Ile	Ser	Leu	Asn
290						295					300				
Pro	Asn	Phe	Val	Lys	Leu	Val	Ala	Trp	Tyr	Asp	Asn	Glu	Trp		
305					310					315					

<210> 4

<211> 438

<212> PRT

<213> Aspergillus Fumigatus

<400> 4

Met	Pro	Ile	Ser	Lys	Ile	His	Ala	Arg	Ser	Val	Tyr	Asp	Ser	Arg	Gly
1				5					10					15	
Asn	Pro	Thr	Val	Glu	Val	Asp	Val	Ala	Thr	Glu	Thr	Gly	Leu	His	Arg
			20					25					30		
Ala	Ile	Val	Pro	Ser	Gly	Ala	Ser	Thr	Gly	Gln	His	Glu	Ala	His	Glu
		35				40						45			
Leu	Arg	Asp	Gly	Asp	Lys	Thr	Gln	Trp	Gly	Gly	Lys	Gly	Val	Leu	Lys
50					55						60				
Ala	Val	Lys	Asn	Val	Asn	Glu	Thr	Ile	Gly	Pro	Ala	Leu	Ile	Lys	Glu
65					70					75					80
Asn	Ile	Asp	Val	Lys	Asp	Gln	Ser	Lys	Val	Asp	Glu	Phe	Leu	Asn	Lys
				85					90					95	
Leu	Asp	Gly	Thr	Ala	Asn	Lys	Ser	Asn	Leu	Gly	Ala	Asn	Ala	Ile	Leu
			100					105					110		
Gly	Val	Ser	Leu	Ala	Val	Ala	Lys	Ala	Gly	Ala	Ala	Glu	Lys	Gly	Val
		115					120					125			
Pro	Leu	Tyr	Ala	His	Ile	Ser	Asp	Leu	Ala	Gly	Thr	Lys	Lys	Pro	Tyr
	130					135					140				
Val	Leu	Pro	Val	Pro	Phe	Gln	Asn	Val	Leu	Asn	Gly	Gly	Ser	His	Ala
145					150					155					160
Gly	Gly	Arg	Leu	Ala	Phe	Gln	Glu	Phe	Met	Ile	Val	Pro	Asp	Ser	Ala
				165					170					175	
Pro	Ser	Phe	Ser	Glu	Ala	Leu	Arg	Gln	Gly	Ala	Glu	Val	Tyr	Gln	Lys
			180					185					190		
Leu	Lys	Ala	Leu	Ala	Lys	Lys	Lys	Tyr	Gly	Gln	Ser	Ala	Gly	Asn	Val
		195					200					205			
Gly	Asp	Glu	Gly	Gly	Val	Ala	Pro	Asp	Ile	Gln	Thr	Ala	Glu	Glu	Ala
	210					215					220				
Leu	Asp	Leu	Ile	Thr	Glu	Ala	Ile	Glu	Gln	Ala	Gly	Tyr	Thr	Gly	Lys
225					230					235					240
Ile	Lys	Ile	Ala	Met	Asp	Val	Ala	Ser	Ser	Glu	Phe	Tyr	Lys	Ala	Asp
				245					250					255	
Val	Lys	Lys	Tyr	Asp	Leu	Asp	Phe	Lys	Asn	Pro	Glu	Ser	Asp	Pro	Ser
			260					265					270		
Lys	Trp	Leu	Thr	Tyr	Glu	Gln	Leu	Ala	Asp	Leu	Tyr	Lys	Ser	Leu	Ala
		275					280						285		

Ala	Lys	Tyr	Pro	Ile	Val	Ser	Ile	Glu	Asp	Pro	Phe	Ala	Glu	Asp	Asp
	290					295					300				
Trp	Glu	Ala	Trp	Ser	Tyr	Phe	Tyr	Lys	Thr	Ser	Asp	Phe	Gln	Ile	Val
305					310					315					320
Gly	Asp	Asp	Leu	Thr	Val	Thr	Asn	Pro	Gly	Arg	Ile	Lys	Lys	Ala	Ile
				325					330					335	
Glu	Leu	Lys	Ser	Cys	Asn	Ala	Leu	Leu	Leu	Lys	Val	Asn	Gln	Ile	Gly
			340					345					350		
Thr	Leu	Thr	Glu	Ser	Ile	Gln	Ala	Ala	Lys	Asp	Ser	Tyr	Ala	Asp	Asn
		355					360						365		
Trp	Gly	Val	Met	Val	Ser	His	Arg	Ser	Gly	Glu	Thr	Glu	Asp	Val	Thr
370						375					380				
Ile	Ala	Asp	Ile	Ala	Val	Gly	Leu	Arg	Ser	Gly	Gln	Ile	Lys	Thr	Gly
385					390					395					400
Ala	Pro	Cys	Arg	Ser	Glu	Arg	Leu	Ala	Lys	Leu	Asn	Gln	Ile	Leu	Arg
				405					410					415	
Ile	Glu	Glu	Glu	Leu	Gly	Glu	Asn	Thr	Val	Tyr	Ala	Gly	Ser	Lys	Phe
			420					425					430		
Arg	Thr	Ala	Val	Asn	Leu										
			435												

<210> 5

<211> 728

<212> PRT

<213> Aspergillus Fumigatus

<400> 5

Met	Arg	Leu	Thr	Phe	Ile	Pro	Ser	Leu	Ile	Gly	Val	Ala	Asn	Ala	Val
1				5					10					15	
Cys	Pro	Tyr	Met	Thr	Gly	Glu	Leu	Asn	Arg	Arg	Asp	Glu	Ile	Ser	Asp
			20					25					30		
Gly	Asp	Ala	Ala	Ala	Ala	Thr	Glu	Glu	Phe	Leu	Ser	Gln	Tyr	Tyr	Leu
		35					40					45			
Asn	Asp	Asn	Asp	Ala	Phe	Met	Thr	Ser	Asp	Val	Gly	Gly	Pro	Ile	Glu
		50				55					60				
Asp	Gln	Asn	Ser	Leu	Ser	Ala	Gly	Glu	Arg	Gly	Pro	Thr	Leu	Leu	Glu
65					70					75					80
Asp	Phe	Ile	Phe	Arg	Gln	Lys	Ile	Gln	Arg	Phe	Asp	His	Glu	Arg	Val
				85					90					95	
Pro	Glu	Arg	Ala	Val	His	Ala	Arg	Gly	Ala	Gly	Ala	His	Gly	Val	Phe
			100					105					110		
Thr	Ser	Tyr	Gly	Asp	Phe	Ser	Asn	Ile	Thr	Ala	Ala	Ser	Phe	Leu	Ala
		115					120					125			
Lys	Glu	Gly	Lys	Gln	Thr	Pro	Val	Phe	Val	Arg	Phe	Ser	Thr	Val	Ala
		130				135					140				
Gly	Ser	Arg	Gly	Ser	Ser	Asp	Leu	Ala	Arg	Asp	Val	His	Gly	Phe	Ala
145					150					155					160
Thr	Arg	Phe	Tyr	Thr	Asp	Glu	Gly	Asn	Phe	Asp	Ile	Val	Gly	Asn	Asn
				165					170					175	
Ile	Pro	Val	Phe	Phe	Ile	Gln	Asp	Ala	Ile	Leu	Phe	Pro	Asp	Leu	Ile
			180					185					190		
His	Ala	Val	Lys	Pro	Arg	Gly	Asp	Asn	Glu	Ile	Pro	Gln	Ala	Ala	Thr
		195					200					205			
Ala	His	Asp	Ser	Ala	Trp	Asp	Phe	Phe	Ser	Gln	Gln	Pro	Ser	Thr	Met
		210				215					220				
His	Thr	Leu	Leu	Trp	Ala	Met	Ser	Gly	His	Gly	Ile	Pro	Arg	Ser	Phe
225					230					235					240

Arg	His	Val	Asp	Gly	Phe	Gly	Val	His	Thr	Phe	Arg	Phe	Val	Thr	Asp	
				245					250					255		
Asp	Gly	Ala	Ser	Lys	Leu	Val	Lys	Phe	His	Trp	Lys	Ser	Leu	Gln	Gly	
			260					265					270			
Lys	Ala	Ser	Met	Val	Trp	Glu	Glu	Ala	Gln	Gln	Thr	Ser	Gly	Lys	Asn	
		275					280					285				
Pro	Asp	Phe	Met	Arg	Gln	Asp	Leu	His	Asp	Ala	Ile	Glu	Ala	Gly	Arg	
	290					295					300					
Tyr	Pro	Glu	Trp	Glu	Leu	Gly	Val	Gln	Ile	Met	Asp	Glu	Glu	Asp	Gln	
305				310					315						320	
Leu	Arg	Phe	Gly	Phe	Asp	Leu	Leu	Asp	Pro	Thr	Lys	Ile	Val	Pro	Glu	
			325					330						335		
Glu	Phe	Val	Pro	Ile	Thr	Lys	Leu	Gly	Lys	Met	Gln	Leu	Asn	Arg	Asn	
			340					345					350			
Pro	Arg	Asn	Tyr	Phe	Ala	Glu	Thr	Glu	Gln	Val	Met	Phe	Gln	Pro	Gly	
		355					360					365				
His	Ile	Val	Arg	Gly	Val	Asp	Phe	Thr	Glu	Asp	Pro	Leu	Leu	Gln	Gly	
	370					375					380					
Arg	Leu	Phe	Ser	Tyr	Leu	Asp	Thr	Gln	Leu	Asn	Arg	His	Gly	Gly	Pro	
385					390					395					400	
Asn	Phe	Glu	Gln	Leu	Pro	Ile	Asn	Gln	Pro	Arg	Val	Pro	Val	His	Asn	
			405					410						415		
Asn	Asn	Arg	Asp	Gly	Ala	Gly	Gln	Met	Phe	Ile	Pro	Leu	Asn	Pro	His	
			420					425					430			
Ala	Tyr	Ser	Pro	Lys	Thr	Ser	Val	Asn	Gly	Ser	Pro	Lys	Gln	Ala	Asn	
		435					440					445				
Gln	Thr	Val	Gly	Asp	Gly	Phe	Phe	Thr	Ala	Pro	Gly	Arg	Thr	Thr	Ser	
	450					455					460					
Gly	Lys	Leu	Val	Arg	Ala	Val	Ser	Ser	Ser	Phe	Glu	Asp	Val	Trp	Ser	
465					470					475					480	
Gln	Pro	Arg	Leu	Phe	Tyr	Asn	Ser	Leu	Val	Pro	Ala	Glu	Lys	Gln	Phe	
			485						490					495		
Val	Ile	Asp	Ala	Ile	Arg	Phe	Glu	Asn	Ala	Asn	Val	Lys	Ser	Pro	Val	
			500					505					510			
Val	Lys	Asn	Asn	Val	Ile	Ile	Gln	Leu	Asn	Arg	Ile	Asp	Asn	Asp	Leu	
		515					520					525				
Ala	Arg	Arg	Val	Ala	Arg	Ala	Ile	Gly	Val	Ala	Glu	Pro	Glu	Pro	Asp	
	530					535					540					
Pro	Thr	Phe	Tyr	His	Asn	Asn	Lys	Thr	Ala	Asp	Val	Gly	Thr	Phe	Gly	
545					550					555					560	
Thr	Lys	Leu	Lys	Lys	Leu	Asp	Gly	Leu	Lys	Val	Gly	Val	Leu	Gly	Ser	
				565						570					575	
Val	Gln	His	Pro	Gly	Ser	Val	Glu	Gly	Ala	Ser	Thr	Leu	Arg	Asp	Arg	
			580					585					590			
Leu	Lys	Asp	Asp	Gly	Val	Asp	Val	Val	Leu	Val	Ala	Glu	Arg	Leu	Ala	
		595					600					605				
Asp	Gly	Val	Asp	Gln	Thr	Tyr	Ser	Thr	Ser	Asp	Ala	Ile	Gln	Phe	Asp	
	610					615					620					
Ala	Val	Val	Val	Ala	Ala	Gly	Ala	Glu	Ser	Leu	Phe	Ala	Ala	Ser	Ser	
625					630					635					640	
Phe	Thr	Gly	Gly	Ser	Ala	Asn	Ser	Ala	Ser	Gly	Ala	Ser	Ser	Leu	Tyr	
			645						650					655		
Pro	Thr	Gly	Arg	Pro	Leu	Gln	Ile	Leu	Ile	Asp	Gly	Phe	Arg	Phe	Gly	
			660					665					670			
Lys	Thr	Val	Gly	Ala	Leu	Gly	Ser	Gly	Thr	Ala	Ala	Leu	Arg	Asn	Ala	
		675					680					685				

Gly Ile Ala Thr Ser Arg Asp Gly Val Tyr Val Ala Gln Ser Val Thr
 690 695 700
 Asp Asp Phe Ala Asn Asp Leu Lys Glu Gly Leu Arg Thr Phe Lys Phe
 705 710 715 720
 Leu Asp Arg Phe Pro Val Asp His
 725

<210> 6

<211> 749

<212> PRT

<213> Aspergillus Fumigatus

<400> 6

Met Ala Thr Lys Ile Ala Gly Gly Leu His Arg Ala Gln Glu Val Leu
 1 5 10 15
 Gln Asn Thr Ser Ser Lys Ser Lys Lys Leu Val Asp Leu Glu Arg Asp
 20 25 30
 Thr Ala Asp Ala His Thr Gln Gln Pro Leu Thr Thr Asp His Gly Val
 35 40 45
 Arg Val Ser Asn Thr Asp Gln Trp Leu Arg Val Thr Asn Asp Arg Arg
 50 55 60
 Thr Gly Pro Ser Leu Leu Glu Asp Gln Ile Ala Arg Glu Lys Ile His
 65 70 75 80
 Arg Phe Asp His Glu Arg Ile Pro Glu Arg Val Val His Ala Arg Gly
 85 90 95
 Thr Gly Ala Phe Gly Asn Phe Lys Leu Lys Glu Ser Ile Glu Asp Leu
 100 105 110
 Thr Tyr Ala Gly Val Leu Thr Asp Thr Ser Arg Asn Thr Pro Val Phe
 115 120 125
 Val Arg Phe Ser Thr Val Gln Gly Ser Arg Gly Ser Ala Asp Thr Val
 130 135 140
 Arg Asp Val Arg Gly Phe Ala Val Lys Phe Tyr Thr Asp Glu Gly Asn
 145 150 155 160
 Trp Asp Ile Val Gly Asn Asn Ile Pro Val Phe Phe Ile Gln Asp Ala
 165 170 175
 Val Lys Phe Pro Asp Phe Val His Ala Val Lys Pro Glu Pro His Asn
 180 185 190
 Glu Val Pro Gln Ala Gln Thr Ala His Asn Asn Phe Trp Asp Phe Val
 195 200 205
 Tyr Leu His Pro Glu Ala Thr His Met Phe Met Trp Ala Met Ser Asp
 210 215 220
 Arg Ala Ile Pro Arg Ser Tyr Arg Met Met Gln Gly Phe Gly Val Asn
 225 230 235 240
 Thr Phe Ala Leu Val Asn Lys Glu Gly Lys Arg His Phe Val Lys Phe
 245 250 255
 His Trp Ile Pro His Leu Gly Val His Ser Leu Val Trp Asp Glu Ala
 260 265 270
 Leu Lys Leu Gly Gly Gln Asp Pro Asp Phe His Arg Lys Asp Leu Met
 275 280 285
 Glu Ala Ile Asp Asn Lys Ala Tyr Pro Lys Trp Asp Phe Ala Ile Gln
 290 295 300
 Val Ile Pro Glu Glu Lys Gln Asp Asp Phe Glu Phe Asp Ile Leu Asp
 305 310 315 320
 Ala Thr Lys Ile Trp Pro Glu Asn Leu Val Pro Leu Arg Val Ile Gly
 325 330 335
 Glu Leu Glu Leu Asn Arg Asn Val Asp Glu Phe Phe Pro Gln Thr Glu
 340 345 350

Gln	Val	Ala	Phe	Cys	Thr	Ser	His	Ile	Val	Pro	Gly	Ile	Asp	Phe	Thr		
		355					360					365					
Asp	Asp	Pro	Leu	Leu	Gln	Gly	Arg	Asn	Phe	Ser	Tyr	Phe	Asp	Thr	Gln		
	370					375					380						
Ile	Ser	Arg	Leu	Gly	Ile	Asn	Trp	Glu	Glu	Leu	Pro	Ile	Asn	Arg	Pro		
385					390					395					400		
Val	Cys	Pro	Val	Leu	Asn	His	Asn	Arg	Asp	Gly	Gln	Met	Arg	His	Arg		
				405					410					415			
Ile	Thr	Gln	Gly	Thr	Val	Asn	Tyr	Trp	Pro	Asn	Arg	Phe	Glu	Ala	Val		
			420					425					430				
Pro	Pro	Thr	Gly	Thr	Lys	Gly	Ser	Gly	Val	Gly	Gly	Gly	Phe	Thr	Thr		
		435					440					445					
Tyr	Pro	Gln	Arg	Val	Glu	Gly	Ile	Lys	Asn	Arg	Ala	Leu	Asn	Asp	Lys		
	450					455					460						
Phe	Arg	Glu	His	His	Asn	Gln	Ala	Gln	Leu	Phe	Tyr	Asn	Ser	Met	Ser		
465					470					475					480		
Glu	His	Glu	Lys	Leu	His	Met	Lys	Lys	Ala	Phe	Ser	Phe	Glu	Leu	Asp		
				485					490					495			
His	Cys	Asp	Asp	Pro	Thr	Val	Tyr	Glu	Arg	Leu	Ala	Gly	His	Arg	Leu		
			500					505					510				
Ala	Glu	Ile	Asp	Leu	Glu	Leu	Ala	Gln	Lys	Val	Ala	Glu	Met	Val	Gly		
		515					520					525					
Ala	Pro	Ile	Pro	Ala	Lys	Ala	Leu	Lys	Gln	Asn	His	Gly	Arg	Arg	Ala		
	530					535					540						
Pro	His	Leu	Ser	Gln	Thr	Glu	Phe	Ile	Pro	Lys	Asn	Pro	Thr	Ile	Ala		
545					550					555					560		
Ser	Arg	Arg	Ile	Ala	Ile	Ile	Ile	Gly	Asp	Gly	Tyr	Asp	Pro	Val	Ala		
				565					570					575			
Ser	Thr	Gly	Leu	Lys	Thr	Ala	Ile	Lys	Ala	Ala	Ser	Ala	Leu	Pro	Phe		
			580					585					590				
Ile	Ile	Gly	Thr	Lys	Arg	Ser	Ala	Ile	Tyr	Ala	Thr	Glu	Asp	Lys	Thr		
		595					600					605					
Ser	Ser	Lys	Gly	Ile	Ile	Pro	Asp	His	His	Tyr	Asp	Gly	Gln	Arg	Ser		
	610					615					620						
Thr	Met	Phe	Asp	Ala	Thr	Phe	Ile	Pro	Gly	Gly	Pro	His	Val	Ala	Thr		
625					630					635					640		
Leu	Arg	Gln	Asn	Gly	Gln	Ile	Lys	Tyr	Trp	Ile	Ser	Glu	Thr	Phe	Gly		
				645					650					655			
His	Leu	Lys	Ala	Leu	Gly	Ala	Thr	Gly	Glu	Ala	Val	Asp	Leu	Val	Lys		
			660					665					670				
Glu	Thr	Leu	Ser	Gly	Thr	Leu	His	Val	Gln	Val	Ala	Ser	Ser	Gln	Ser		
		675					680					685					
Pro	Glu	Pro	Val	Glu	Trp	Tyr	Gly	Val	Val	Thr	Ala	Gly	Gly	Lys	Gln		
	690					695					700						
Lys	Pro	Glu	Ser	Phe	Lys	Glu	Ser	Val	Gln	Ile	Leu	Lys	Gly	Ala	Thr		
705					710					715					720		
Asp	Phe	Val	Gly	Lys	Phe	Phe	Tyr	Gln	Ile	Ser	Gln	His	Arg	Asn	Tyr		
				725					730					735			
Gln	Arg	Glu	Leu	Asp	Gly	Leu	Ala	Ser	Thr	Ile	Ala	Phe					
			740					745									

<210> 7

<211> 16

<212> PRT

<213> Aspergillus Fumigatus

<400> 7

Lys Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys Val Val Thr Thr
 1 5 10 15

<210> 8

<211> 16

<212> PRT

<213> Aspergillus Fumigatus

<400> 8

Lys Glu Gly Ala Glu Gln Ser Ala Pro Gln Ala Glu His Ser Thr Lys
 1 5 10 15

<210> 9

<211> 17

<212> PRT

<213> Aspergillus Fumigatus

<400> 9

Pro Val Pro Asp Asp Ile Thr Val Lys Gln Ala Thr Glu Lys Cys Gly
 1 5 10 15
 Asp

<210> 10

<211> 15

<212> PRT

<213> Aspergillus Fumigatus

<400> 10

Ala Thr Tyr Ala Gly Asp Val Thr Asp Ile Asp Glu Gly Ile Leu
 1 5 10 15

<210> 11

<211> 16

<212> PRT

<213> Aspergillus Fumigatus

<400> 11

Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn Gly Asp Glu Arg Ser
 1 5 10 15

<210> 12

<211> 18

<212> PRT

<213> Aspergillus Fumigatus

<400> 12

Phe Lys Gly Thr Ile Glu Thr Tyr Asp Gln Gly Leu Ile Val Asn Gly
 1 5 10 15
 Lys Lys

<210> 13

<211> 17

<212> PRT

<213> Aspergillus Fumigatus

<400> 13
 Lys Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys Glu Asn Ile
 1 5 10 15
 Asp

<210> 14
 <211> 18
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 14
 Thr Ser Asp Phe Gln Ile Val Gly Asp Asp Leu Thr Val Thr Asn Pro
 1 5 10 15
 Gly Arg

<210> 15
 <211> 20
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 15
 Asp Glu Glu Asp Gln Leu Arg Phe Gly Phe Asp Leu Leu Asp Pro Thr
 1 5 10 15
 Lys Ile Val Pro
 20

<210> 16
 <211> 16
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 16
 Arg Ile Asp Asn Asp Leu Ala Arg Arg Val Ala Arg Ala Ile Gly Val
 1 5 10 15

<210> 17
 <211> 12
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 17
 Lys Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys
 1 5 10

<210> 18
 <211> 10
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 18
 Phe Pro Val Pro Asp Asp Ile Thr Val Lys
 1 5 10

<210> 19

<211> 20
<212> PRT
<213> Aspergillus Fumigatus

<400> 19
Ala Thr Tyr Ala Gly Asp Val Thr Asp Ile Asp Glu Gly Ile Leu Ala
1 5 10 15
Gly Thr Leu Lys
20

<210> 20
<211> 11
<212> PRT
<213> Aspergillus Fumigatus

<400> 20
Ala Gly Ile Ser Leu Asn Pro Asn Phe Val Lys
1 5 10

<210> 21
<211> 15
<212> PRT
<213> Aspergillus Fumigatus

<400> 21
Thr Ala Ala Gln Asn Ile Ile Pro Ser Ser Thr Gly Ala Ala Lys
1 5 10 15

<210> 22
<211> 20
<212> PRT
<213> Aspergillus Fumigatus

<400> 22
Asn Ile Leu Gly Tyr Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn
1 5 10 15
Gly Asp Glu Arg
20

<210> 23
<211> 12
<212> PRT
<213> Aspergillus Fumigatus

<400> 23
Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys
1 5 10

<210> 24
<211> 15
<212> PRT
<213> Aspergillus Fumigatus

<400> 24
Val Asn Gln Ile Gly Thr Leu Thr Glu Ser Ile Gln Ala Ala Lys
1 5 10 15

<210> 25
<211> 12
<212> PRT
<213> Aspergillus Fumigatus

<400> 25
Trp Leu Thr Tyr Glu Gln Leu Ala Asp Leu Tyr Lys
1 5 10

<210> 26
<211> 11
<212> PRT
<213> Aspergillus Fumigatus

<400> 26
Val Ala Gln Glu Ile Ile Asn Pro Gly Pro Lys
1 5 10

<210> 27
<211> 10
<212> PRT
<213> Aspergillus Fumigatus

<400> 27
Phe Gly Phe Asp Leu Leu Asp Pro Thr Lys
1 5 10

<210> 28
<211> 9
<212> PRT
<213> Aspergillus Fumigatus

<400> 28
Ser Ile Ser Phe Gln Leu Asp Cys Arg
1 5

<210> 29
<211> 15
<212> PRT
<213> Aspergillus Fumigatus

<400> 29
Glu Gly Ala Glu Gln Ser Ala Pro Gln Ala Glu His Ser Thr Lys
1 5 10 15

<210> 30
<211> 12
<212> PRT
<213> Aspergillus Fumigatus

<400> 30
Val Val Thr Thr Pro Tyr Thr Cys Asp Gln Val Lys
1 5 10

<210> 31
<211> 14

<212> PRT
 <213> Aspergillus Fumigatus

 <400> 31
 Val Pro Thr Ser Asn Val Ser Val Val Asp Leu Thr Cys Arg
 1 5 10

 <210> 32
 <211> 9
 <212> PRT
 <213> Aspergillus Fumigatus

 <400> 32
 Tyr Asp Thr Thr His Gly Gln Phe Lys
 1 5

 <210> 33
 <211> 15
 <212> PRT
 <213> Aspergillus Fumigatus

 <400> 33
 Gly Thr Ile Glu Thr Tyr Asp Gln Gly Leu Ile Val Asn Gly Lys
 1 5 10 15

 <210> 34
 <211> 12
 <212> PRT
 <213> Aspergillus Fumigatus

 <400> 34
 Thr Gly Pro Ser Leu Leu Glu Asp Gln Ile Ala Arg
 1 5 10

 <210> 35
 <211> 172
 <212> PRT
 <213> Aspergillus Fumigatus

 <400> 35
 Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala Lys Val
 1 5 10 15
 Ile Asn Asp Lys Phe Gly Ile Val Glu Gly Leu Met Thr Thr Val His
 20 25 30
 Ser Tyr Thr Ala Thr Gln Lys Val Val Asp Ala Pro Ser Asn Lys Asp
 35 40 45
 Trp Arg Gly Gly Arg Thr Ala Ala Gln Asn Ile Ile Pro Ser Ser Thr
 50 55 60
 Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Ser Leu Asn Gly Lys
 65 70 75 80
 Leu Thr Gly Met Ala Met Arg Val Pro Thr Ser Asn Val Ser Val Val
 85 90 95
 Asp Leu Thr Cys Arg Leu Glu Lys Gly Ala Ser Tyr Asp Glu Ile Lys
 100 105 110
 Gln Ala Ile Lys Ala Ala Ser Glu Glu Gly Glu Leu Lys Asn Ile Leu
 115 120 125
 Gly Tyr Thr Glu Asp Asp Val Val Ser Ser Asp Leu Asn Gly Asp Glu

130		135		140
Arg Ser Ser Ile Phe Asp Ala Lys Ala Gly Ile Ser Leu Asn Pro Asn				
145		150		155
Phe Val Lys Leu Val Ala Trp Tyr Asp Asn Glu Trp				
	165		170	

<210> 36
 <211> 368
 <212> PRT
 <213> Aspergillus Fumigatus

<220>
 <221> VARIANT
 <222> (1)...(368)
 <223> Xaa = Any Amino Acid

<400> 36	
Met Val Thr Thr Tyr Asn Ile Leu Val Leu Pro Gly Asp Gly Ile Gly	
1	5
Pro Glu Val Met Thr Glu Ala Val Lys Val Leu Lys Val Phe Glu Asn	10
	20
Glu His Arg Lys Phe Asn Leu Arg Gln Glu Leu Ile Gly Gly Cys Ser	25
	30
Ile Asp Ala His Gly Lys Ser Val Thr Glu Glu Val Lys Lys Ala Ala	35
	40
Leu Glu Ser Asp Ala Val Leu Phe Ala Ala Val Gly Gly Pro Lys Trp	45
65	50
Asp His Ile Arg Arg Gly Leu Asp Gly Pro Glu Gly Gly Leu Leu Gln	55
	60
Leu Arg Lys Ala Met Asp Ile Tyr Ala Asn Leu Arg Pro Cys Ser Ala	65
	70
Ser Ser Pro Ser Ala Ser Ile Ala Lys Glu Phe Ser Pro Phe Arg Gln	75
	80
Glu Val Ile Glu Gly Val Asp Phe Val Val Val Arg Glu Asn Cys Gly	85
	90
Gly Ala Tyr Phe Gly Lys Lys Ile Glu Glu Glu Asp Tyr Ala Met Asp	95
145	100
Glu Trp Gly Tyr Ser Glu Arg Glu Ile Gln Arg Ile Thr Arg Leu Xaa	105
	110
Ala Glu Xaa Ala Leu Arg His Asn Pro Pro Trp Pro Val Ile Ser Leu	115
	120
Asp Lys Ala Asn Val Leu Ala Ser Ser Arg Leu Trp Arg Arg Val Val	125
	130
Glu Lys Thr Met Thr Thr Glu Tyr Pro Gln Val Lys Leu Val His Gln	135
	140
Leu Ala Asp Ser Ala Ser Leu Ile Leu Ala Thr Asn Pro Arg Ala Leu	145
225	150
Asn Gly Val Ile Leu Ala Asp Asn Thr Phe Gly Asp Met Ile Ser Asp	155
	160
Gln Ala Gly Ser Ile Val Gly Thr Leu Gly Val Leu Pro Ser Ala Ser	165
	170
Leu Asp Gly Leu Pro Ser Glu Thr Arg Lys Arg Thr Asn Gly Leu Tyr	175
	180
Glu Pro Thr His Gly Ser Ala Pro Thr Ile Ala Gly Gln Asn Ile Ala	185
	190
Asn Pro Val Ala Met Ile Leu Cys Val Ala Leu Met Phe Arg Tyr Ser	195
305	200

Leu Asp Met Glu Thr Glu Ala Gln Arg Ile Glu Lys Ala Val Gln Gly
325 330 335
Val Leu Asp Ala Gly Ile Arg Thr Pro Asp Leu Gly Gly Lys Ser Gly
340 345 350
Thr Asn Glu Val Gly Asp Ala Ile Val Ala Ala Leu Gln Gly Ser Ser
355 360 365

<210> 37
<211> 8
<212> PRT
<213> Aspergillus Fumigatus

<220>
<221> VARIANT
<222> (1)...(8)
<223> Xaa = Any Amino Acid

<400> 37
Leu Xaa Ala Glu Xaa Ala Leu Arg
1 5

<210> 38
<211> 1226
<212> DNA
<213> Aspergillus Fumigatus

<220>
<221> misc_feature
<222> (1)...(1226)
<223> n = A,T,C or G

<400> 38
atggttaacta cttacaacat cctcgtcctc cccggcgatg ggatcgggtc cgaggtcatg 60
accgaagcgg tcaaggtgct aaaggtcttt gagaacgagc accgaaagt caacctccgg 120
caagagctca tcggcggttg cagcatcgat ggcacggaa aatccgtcac agaagaagt 180
aaaaaggccg ctctggaatc cgacgccgtg ctcttcgcag cagtcggagg tcccaaattg 240
gaccatatcc gtcgtggtct tgacggggcc gagggaggcc tgctgcagct ccgcaaggcg 300
atggacatct acgcgaatct caggccgtgc tcggccagtt cgccgagtgc gtcgatcgcg 360
aaggagttaa gccattccg ccaggaagtg atcgagggcg tagatttcgt cgtggtgagg 420
gagaactgcg ggggagcgta tttcggaag aagatcgaag aagaagatta tggtagctcg 480
tttttaacaa gcagtatgct ttcgagactg actgtgttat ttcagcgatg gacgaatggg 540
gctatagcga gcgcgagatc cagcgcacat cccgcctcnn ngcggaannn gccctccgtc 600
acaaccccc ctggcccgtc atctccctgg acaaagccaa tgtgctcgcc tcgtcgcggc 660
tctggcgggc cgtcgttgaa aagaccatga cactgagta tccccagggt aagctcgtgc 720
accagctggc agactcagca tcgctgattc tagcgacca cccgcgggca ttgaacgggt 780
tcattctggc tgacaacaca ttcggcgaca tgatttctga ccaggccggt tccatcgtcg 840
ggacattggg cgtgcttccc agtgccagtc tcgatggact acccagtga acaagaaagc 900
ggacaaatgg tctgtacgag ccgacccatg gatctgcacc gacgtacgtt tcttcctttg 960
ttaccgaat tatcatgttt cactgaagca agctgacaat catctgcaga attgcggggc 1020
agaacatcgc caaccccggt gccatgatcc tctgtgtggc tctcatgttc cgctattcgc 1080
tagacatgga gaccgaggcg caacggatcg aaaaagcagt gcagggtgtt cttgatgccg 1140
ggatccgcac ccctgatctg ggtgggaat cggggacgaa tgaagttggg gatgcaattg 1200
ttgctgcgtt gcagggtagt tcataa 1226

<210> 39
<211> 1107
<212> DNA

<213> Aspergillus Fumigatus

<220>

<221> misc_feature

<222> (1)...(1107)

<223> n = A,T,C or G

<400> 39

atggttaacta	cttacaacat	cctcgtcctc	cccggcgatg	ggatcgggtcc	cgagggtcatg	60
accgaagcgg	tcaaggtgct	aaaggtcttt	gagaacgagc	accgaaagtt	caacctccgg	120
caagagctca	tcggcggttg	cagcatcgat	gcgcacggaa	aatccgtcac	agaagaagtg	180
aaaaaggccg	ctctggaatc	cgacgccgtg	ctcttcgcag	cagtcggagg	tcccaaattg	240
gaccatatcc	gtcgtggtct	tgacgggccc	gagggaggcc	tgctgcagct	ccgcaaggcg	300
atggacatct	acgcgaatct	caggccgtgc	tcggccagtt	cgccgagtgc	gtcgcgcgcg	360
aaggagttta	gcccattccg	ccaggaaagt	atcgaggggc	tagatttcgt	cgtgggtgagg	420
gagaactgcg	ggggagcgta	tttcgggaag	aagatcgaag	aagaagatta	tgcgatggac	480
gaatggggct	atagcgagcg	cgagatccag	cgcatacccc	gcctcnngc	ggaannngcc	540
ctccgtcaca	acccccctg	gcccgtcatc	tccctggaca	aagccaatgt	gctcgccctcg	600
tcgcggtctt	ggcgggcgct	cgttgaaaag	accatgacca	ctgagtatcc	ccaggtgaag	660
ctcgtgcacc	agctggcaga	ctcagcatcg	ctgattctag	cgaccaaccc	gcgggcattg	720
aacggtgtca	tcttggtgta	caacacattc	ggcgacatga	tttctgacca	ggccgggtcc	780
atcgtcggga	cattgggctg	gcttcccagt	gccagtctcg	atggactacc	cagtgaacaa	840
agaaagcgga	caaattggtct	gtacgagccg	acccatggat	ctgcaccgac	gattgcgggc	900
cagaacatcg	ccaaccccgt	tgccatgatc	ctctgtgtgg	ctctcatggt	ccgctattcg	960
ctagacatgg	agaccgaggc	gcaacggatc	gaaaaagcag	tgcaagggtg	tcttgatgcc	1020
gggatccgca	cccctgatct	gggtgggaaa	tcggggacga	atgaagttgg	ggatgcaatt	1080
gttgctgcgt	tgcaagggtag	ttcataa				1107

<210> 40

<211> 1093

<212> DNA

<213> Aspergillus Fumigatus

<400> 40

atgccgtcat	ataacattgt	cgtttttcgt	ggggaccact	gtgggtccgga	ggtaagttcg	60
gtcctgcgcg	tcacgcagaa	gtgccgtgac	gatgctacct	tcaacctcca	ggatcaattg	120
ctcgttggtg	taagtctgat	cgatgctacc	ggatctcccc	ttaccgacga	agctcttaac	180
gccgcaaaga	acgccgatgc	cgttctcctc	ggtgccattg	gcgggtcccaa	atggggcact	240
ggcgccgtcc	gccccgaaca	gggcctcctc	cgtctgcgca	aggagatggg	cacattcggg	300
aacctccgcc	cctgcaactt	cgccgccccg	tcgctgggtc	acggctcccc	tctccgcccc	360
gaagtctgcc	gcggcgctga	cttcaacatt	atccgcgaac	tgaccgggtg	catctacttc	420
ggcgaccgca	aggaggacga	cggcagcggc	ttcgccatgg	acacggagcc	gtactcccgc	480
gcggagatcg	agcgcatacc	ccgccttgcg	gcccacctcg	ctctgcagca	caacccccct	540
cttcccgtgt	ggagcttgga	caaggccaac	gtcctcgcga	cgagccgggt	gtggcggaag	600
accgtgacgg	aggtcatggc	caaggagttc	ccccagctca	aggtggagca	ccagctcatt	660
gactccgcgg	ccatgatcat	ggtcaaggag	cctagaaagc	ttaacgggat	tgttgtaact	720
agcaacctgt	tcggtgacat	catcagtgat	gaagccagcg	ttatccctgg	ttctctggga	780
ctcttgccca	gcgcaagctt	gagcggcatt	cctgacggaa	agaccaaggt	caatggatat	840
tatgagccta	ttcacggttc	tgccccgtgac	attgccggca	agggcatcgt	taaccccgtc	900
gccgccattc	tctctgtcgc	catgatgatg	cagtactccc	tgaaccgtat	ggatgacgcc	960
agggccatcg	agacggccgt	ccgcaatgtg	atcgaggccg	gtatccgcac	tgccgatatt	1020
ggcggaagtg	cgacaactag	cgagggtcgg	gacgctgttg	ctgccgagct	ggagaagctg	1080
ttgaagcaat	agt					1093

<210> 41

<211> 363

<212> PRT

<213> Aspergillus Fumigatus

<400> 41

Met	Pro	Ser	Tyr	Asn	Ile	Val	Val	Phe	Ala	Gly	Asp	His	Cys	Gly	Pro
1				5				10						15	
Glu	Val	Ser	Ser	Val	Leu	Arg	Val	Ile	Glu	Lys	Cys	Arg	Asp	Asp	Ala
			20					25					30		
Thr	Phe	Asn	Leu	Gln	Asp	Gln	Leu	Leu	Gly	Gly	Val	Ser	Ser	Ile	Asp
		35					40					45			
Ala	Thr	Gly	Ser	Pro	Leu	Thr	Asp	Glu	Ala	Leu	Asn	Ala	Ala	Lys	Asn
	50					55					60				
Ala	Asp	Ala	Val	Leu	Leu	Gly	Ala	Ile	Gly	Gly	Pro	Lys	Trp	Gly	Thr
65				70					75					80	
Gly	Ala	Val	Arg	Pro	Glu	Gln	Gly	Leu	Leu	Arg	Leu	Arg	Lys	Glu	Met
				85				90						95	
Gly	Thr	Phe	Gly	Asn	Leu	Arg	Pro	Cys	Asn	Phe	Ala	Ala	Pro	Ser	Leu
			100					105					110		
Val	Asp	Gly	Ser	Pro	Leu	Arg	Pro	Glu	Val	Cys	Arg	Gly	Val	Asp	Phe
		115					120					125			
Asn	Ile	Ile	Arg	Glu	Leu	Thr	Gly	Gly	Ile	Tyr	Phe	Gly	Asp	Arg	Lys
	130					135					140				
Glu	Asp	Asp	Gly	Ser	Gly	Phe	Ala	Met	Asp	Thr	Glu	Pro	Tyr	Ser	Arg
145				150					155					160	
Ala	Glu	Ile	Glu	Arg	Ile	Thr	Arg	Leu	Ala	Ala	His	Leu	Ala	Leu	Gln
				165				170						175	
His	Asn	Pro	Pro	Leu	Pro	Val	Trp	Ser	Leu	Asp	Lys	Ala	Asn	Val	Leu
			180					185					190		
Ala	Thr	Ser	Arg	Leu	Trp	Arg	Lys	Thr	Val	Thr	Glu	Val	Met	Ala	Lys
		195					200					205			
Glu	Phe	Pro	Gln	Leu	Lys	Val	Glu	His	Gln	Leu	Ile	Asp	Ser	Ala	Ala
	210					215					220				
Met	Ile	Met	Val	Lys	Glu	Pro	Arg	Lys	Leu	Asn	Gly	Ile	Val	Val	Thr
225				230					235					240	
Ser	Asn	Leu	Phe	Gly	Asp	Ile	Ile	Ser	Asp	Glu	Ala	Ser	Val	Ile	Pro
			245						250					255	
Gly	Ser	Leu	Gly	Leu	Leu	Pro	Ser	Ala	Ser	Leu	Ser	Gly	Ile	Pro	Asp
			260					265					270		
Gly	Lys	Thr	Lys	Val	Asn	Gly	Ile	Tyr	Glu	Pro	Ile	His	Gly	Ser	Ala
		275					280					285			
Pro	Asp	Ile	Ala	Gly	Lys	Gly	Ile	Val	Asn	Pro	Val	Ala	Ala	Ile	Leu
	290					295					300				
Ser	Val	Ala	Met	Met	Met	Gln	Tyr	Ser	Leu	Asn	Arg	Met	Asp	Asp	Ala
305				310						315				320	
Arg	Ala	Ile	Glu	Thr	Ala	Val	Arg	Asn	Val	Ile	Glu	Ala	Gly	Ile	Arg
				325					330					335	
Thr	Ala	Asp	Ile	Gly	Gly	Lys	Ser	Thr	Thr	Ser	Glu	Val	Gly	Asp	Ala
			340					345					350		
Val	Ala	Ala	Glu	Leu	Glu	Lys	Leu	Leu	Lys	Gln					
		355					360								

<210> 42

<211> 18

<212> DNA

<213> Aspergillus Fumigatus

<400> 42

atgcctatct ccaagatc 18

<210> 43

<211> 15

<212> DNA

<213> Aspergillus Fumigatus

<400> 43

caggttgacg gcagt 15

<210> 44

<211> 18

<212> DNA

<213> Aspergillus Fumigatus

<400> 44

atggtaacta cttacaac 18

<210> 45

<211> 18

<212> DNA

<213> Aspergillus Fumigatus

<400> 45

tgaactaccc tgcaacgc 18

<210> 46

<211> 1233

<212> DNA

<213> Aspergillus Fumigatus

<400> 46

atgggttctg	gatccggtga	tgacgatgac	aagctcgccc	ttatggtaac	tacttacaac	60
atcctcgtcc	tccccggcga	tgggatcggt	cccagaggtca	tgaccgaagc	ggtcaaggtg	120
ctaaaggctct	ttgagaacga	gcaccgaaag	ttcaacctcc	ggcaagagct	catcggcggt	180
tgacgcatcg	atgcgcacgg	aaaatccgtc	acagaagaag	tgaaaaaggc	cgctctggaa	240
tccgacgccg	tgtctttcgc	agcagtcgga	ggtcccaaatt	gggaccatat	ccgtcgtggt	300
cttgacgggc	cggagggagg	cctgctgcag	ctccgcaagg	cgatggacat	ctacgcgaat	360
ctcaggccgt	gctcggccag	ttcgccgagt	gcgtcgatcg	cgaaggagtt	tagcccatc	420
cgccaggaag	tgatcgaggg	cgtagatttc	gtcgtggtga	gggagaactg	cgggggagcg	480
tatttcggga	agaagatcga	agaagaagat	tatgcgatgg	acgaatgggg	ctatagcgag	540
cgcgagatcc	agcgcatac	ccgcctctcg	gcggaatttg	ccctccgtca	caaccccccc	600
tggcccgta	tctccctgga	caaagccaat	gtgctcgct	cgtcgcggct	ctggcgggcg	660
gtcgttgaaa	agaccatgac	caactgagat	ccccaggtga	agctcgtgca	ccagctggca	720
gactcagcat	cgctgattct	agcgaccaac	ccgcgggcat	tgaacgggtg	catcttggct	780
gacaacacat	tcggcgacat	gatttctgac	caggccgggt	ccatcgtcgg	gacattgggc	840
gtgcttccca	gtgccagtct	cgatggacta	cccagtga	caagaaagcg	gacaaatgg	900
ctgtacgagc	cgacccatgg	atctgcaccg	acaattgcgg	gccagaacat	cgccaacccc	960
gttgccatga	tcctctgtgt	ggctctcatg	ttccgctatt	cgctagacat	ggagaccgag	1020
gcgcaacgga	tcgaaaaagc	agtgcagggt	gttcttgatg	ccgggatccg	caccctgat	1080
ctgggtggga	aatcggggac	gaatgaagtt	ggggatgcaa	ttgttgctgc	gttgacgggt	1140
agttcaaaag	gcgagcttga	aggtaagcct	atccctaacc	ctctcctcgg	tctcgattct	1200
acgcgtaccg	gtcatcatca	ccatcaccat	tga			1233

<210> 47

<211> 410

<212> PRT

<400> 47

<210> 48

<211> 1443
 <212> DNA
 <213> Aspergillus Fumigatus

<400> 48
 atgggctctg gatccggtga tgacgatgac aagctcgccc ttatgcctat ctccaagatc 60
 cacgctcgtt ccgtgtacga ctctcgcggt aacccccaccg ttgaggtgga cgttgtcacc 120
 gagaccggtt tgcaccgtgc tattgttcct tctggagctt ccaccggcca gcacgaggct 180
 cacgagctcc gtgacggtga taagaccag tggggcggca aggggtgtcct caaggctgtc 240
 aagaatgtca acgagacat tggccctgct ctcatcaagg agaacatcga tgtgaaggac 300
 cagtctaagg tcgacgagtt ccttaacaag cttgacggga ctgccaacaa gtccaacctc 360
 ggtgctaatt ccctcctcgg tgtcagcttg gctgttgcca aggctgggtgc tgctgagaag 420
 ggtgtccctc tctacgtcga catctccgac cttgccggta ccaagaagcc ctatgtcctt 480
 cccgttcctt tccagaacgt cctgaacggc ggctctcacg ccggtgggtcg cctcgctttc 540
 caggagttca tgatcgctcc tgactccgct ccctctttct ccgaggccct ccgccagggt 600
 gctgaggtct accagaagct caaggctctg gccagaaga agtacggcca gtccgctggc 660
 aacgttggtg acgagggtgg tgttgctccc gatattcaga ccgccgagga ggctctcgac 720
 ctgatcaccg aggccatcga gcaggccggc tacaccggca agatcaagat cgctatggac 780
 gttgcctcca gcgagttcta caaggccgac gtcaagaagt acgacctga cttcaagaac 840
 cccgagagcg acccctccaa gtggctcacc tacgagcagc ttgccgacct ctacaagtcc 900
 cttgctgcca agtaccctat tgtcagcatt gaggaccctt tcgctgagga tgattgggag 960
 gcctggagct acttctacaa gacctccgac ttccagattg ttggtgatga cctgactgtt 1020
 actaacctg ggcgtatcaa gaaggccatc gagctcaagt cctgcaacgc cctcctgctc 1080
 aaggtaacc agatcggtac cctcaccgag tccatccagg ccgccaagga ctccctacgcc 1140
 gacaactggg gtgtcatggt ctcccaccgc tctggtgaga ctgaggacgt caccattgcc 1200
 gacattgctg tcggtctgcg ctctggccag atcaagaccg gtgctccttg ccgttccgag 1260
 cgtctggcta agctgaacca gatcctccgt atcgaggagg agctcggcga gaatgccgtc 1320
 tacgctggtt ccaagttccg cactgccgtc aacctgaagg gcgagcttga aggtaagcct 1380
 atccctaacc ctctcctcgg tctcgattct acgctaccg gtcattcatca ccatcaccat 1440
 tga 1443

<210> 49
 <211> 480
 <212> PRT
 <213> Aspergillus Fumigatus

<400> 49
 Met Gly Ser Gly Ser Gly Asp Asp Asp Asp Lys Leu Ala Leu Met Pro
 1 5 10 15
 Ile Ser Lys Ile His Ala Arg Ser Val Tyr Asp Ser Arg Gly Asn Pro
 20 25 30
 Thr Val Glu Val Asp Val Val Thr Glu Thr Gly Leu His Arg Ala Ile
 35 40 45
 Val Pro Ser Gly Ala Ser Thr Gly Gln His Glu Ala His Glu Leu Arg
 50 55 60
 Asp Gly Asp Lys Thr Gln Trp Gly Gly Lys Gly Val Leu Lys Ala Val
 65 70 75 80
 Lys Asn Val Asn Glu Thr Ile Gly Pro Ala Leu Ile Lys Glu Asn Ile
 85 90 95
 Asp Val Lys Asp Gln Ser Lys Val Asp Glu Phe Leu Asn Lys Leu Asp
 100 105 110
 Gly Thr Ala Asn Lys Ser Asn Leu Gly Ala Asn Ala Ile Leu Gly Val
 115 120 125
 Ser Leu Ala Val Ala Lys Ala Gly Ala Ala Glu Lys Gly Val Pro Leu
 130 135 140
 Tyr Ala His Ile Ser Asp Leu Ala Gly Thr Lys Lys Pro Tyr Val Leu
 145 150 155 160

Pro	Val	Pro	Phe	Gln	Asn	Val	Leu	Asn	Gly	Gly	Ser	His	Ala	Gly	Gly	
				165					170					175		
Arg	Leu	Ala	Phe	Gln	Glu	Phe	Met	Ile	Val	Pro	Asp	Ser	Ala	Pro	Ser	
			180					185					190			
Phe	Ser	Glu	Ala	Leu	Arg	Gln	Gly	Ala	Glu	Val	Tyr	Gln	Lys	Leu	Lys	
		195					200					205				
Ala	Leu	Ala	Lys	Lys	Lys	Tyr	Gly	Gln	Ser	Ala	Gly	Asn	Val	Gly	Asp	
	210					215					220					
Glu	Gly	Gly	Val	Ala	Pro	Asp	Ile	Gln	Thr	Ala	Glu	Glu	Ala	Leu	Asp	
225					230					235					240	
Leu	Ile	Thr	Glu	Ala	Ile	Glu	Gln	Ala	Gly	Tyr	Thr	Gly	Lys	Ile	Lys	
				245					250					255		
Ile	Ala	Met	Asp	Val	Ala	Ser	Ser	Glu	Phe	Tyr	Lys	Ala	Asp	Val	Lys	
			260					265					270			
Lys	Tyr	Asp	Leu	Asp	Phe	Lys	Asn	Pro	Glu	Ser	Asp	Pro	Ser	Lys	Trp	
		275					280					285				
Leu	Thr	Tyr	Glu	Gln	Leu	Ala	Asp	Leu	Tyr	Lys	Ser	Leu	Ala	Ala	Lys	
	290					295					300					
Tyr	Pro	Ile	Val	Ser	Ile	Glu	Asp	Pro	Phe	Ala	Glu	Asp	Asp	Trp	Glu	
305					310					315					320	
Ala	Trp	Ser	Tyr	Phe	Tyr	Lys	Thr	Ser	Asp	Phe	Gln	Ile	Val	Gly	Asp	
				325					330					335		
Asp	Leu	Thr	Val	Thr	Asn	Pro	Gly	Arg	Ile	Lys	Lys	Ala	Ile	Glu	Leu	
			340					345					350			
Lys	Ser	Cys	Asn	Ala	Leu	Leu	Leu	Lys	Val	Asn	Gln	Ile	Gly	Thr	Leu	
		355					360					365				
Thr	Glu	Ser	Ile	Gln	Ala	Ala	Lys	Asp	Ser	Tyr	Ala	Asp	Asn	Trp	Gly	
	370					375					380					
Val	Met	Val	Ser	His	Arg	Ser	Gly	Glu	Thr	Glu	Asp	Val	Thr	Ile	Ala	
385					390					395					400	
Asp	Ile	Ala	Val	Gly	Leu	Arg	Ser	Gly	Gln	Ile	Lys	Thr	Gly	Ala	Pro	
				405					410					415		
Cys	Arg	Ser	Glu	Arg	Leu	Ala	Lys	Leu	Asn	Gln	Ile	Leu	Arg	Ile	Glu	
			420					425					430			
Glu	Glu	Leu	Gly	Glu	Asn	Ala	Val	Tyr	Ala	Gly	Ser	Lys	Phe	Arg	Thr	
		435					440					445				
Ala	Val	Asn	Leu	Lys	Gly	Glu	Leu	Glu	Gly	Lys	Pro	Ile	Pro	Asn	Pro	
	450					455					460					
Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	His	His	His	His	His	His	
465					470					475					480	

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.